Piper
Air Safety Investigation

# AIR SAFETY
# INVESTIGATION DEPARTMENT
# TWIN- ENGINE ACCIDENT REPORT

## GENERAL INFORMATION

| ACCIDENT NUMBER | NTSB NUMBER | AIRCRAFT REGISTRATION |
|---|---|---|
| 11013001 | WPR11LA113 | N64RJ |
| **AIRCRAFT YEAR / MODEL** | **AIRCRAFT SERIES** | **SERIAL NUMBER** |
| 1969 / PA-30 | Twin Comanche | 30-1931 |
| **ACCIDENT DATE** | **ACCIDENT TIME** | **ACCIDENT LOCATION** |
| 01/30/2011 | 0720 PST | Big Bear City, CA |

| WRECKAGE EXAM DATE | EXAM LOCATION |
|---|---|
| 02/02/2011 | Aircraft Recovery Service, Pearblossom, CA |
| **# OCCUPANTS** | **INJURIES** |
| 1 | 1 Serious |
| **OWNER** | **OWNER ADDRESS** |
| Tower General Contractors, Inc. | [redacted] |
| DOR: 05/06/2010 | Sun Valley, CA 91352-2061 |
| **OPERATOR** | **OPERATOR ADDRESS** |
| Owner/Pilot | |
| | |
| **INSURER** | **INSURER ADDRESS** |
| Arnold & Arnold | [redacted] |
| | San Diego, CA 92101 |
| **CLAIM REPRESENTITIVE** | **CLAIM REPRESENTITIVE ADDRESS** |
| Charles W. (Bill) Arnold | [redacted] |
| **PHONE:** [redacted] | San Diego, CA 92101 |

| RECOVERY COMPANY (IF ANY) | RECOVERY ADDRESS |
|---|---|
| Aircraft Recovery Services, Inc. | [redacted] |
| **PHONE:** [redacted] | Pearblossom, CA 93553-2188 |

## INVESTIGATORS

| | NAME | OFFICE | PHONE | E-MAIL |
|---|---|---|---|---|
| NTSB | Patrick Jones | WPR | [redacted] | |
| FAA | Jon H. Weston | Riverside, CA | | |
| PIPER | Charles R. Little | Chino Hills, CA | | |
| LYC | Mark W. Platt | Van Nuys, CA | | |
| | | | | |
| | | | | |
| | | | | |

File Series: 1241.002
Form # 136-070
(Revised 02/10)

## OPERATIONS & WEATHER

FLIGHT PLANNING

DEPARTURE DATE/TIME 01/30/2011 @ 0715 PST AIRPORT Big Bear City, CA (L35)
ACCIDENT DATE/TIME 01/30/2011 @ 0720 PST
DESTINATION AIRPORT Pacoima, CA (WHP)
FLIGHT PLAN FILED? VFR _____ IFR _____ NONE X U/K _____

WEATHER BRIEFING GIVEN TO PILOT? YES _____ NO _____ U/K X
WHEN/WHERE U/K
FORECAST U/K

WEATHER AT DEPARTURE VFR
WEATHER AT ACCIDENT SITE VFR

ADDITIONAL DETAILED WEATHER INFORMATION IN SECTION 6? YES X NO _____

WHEN WAS AIRCRAFT FUELED LAST;
BY WHOM/ WHERE/ AMOUNT/TYPE: Unknown.

COMMUNICATIONS

WAS A PROBLEM/EMERGENCY DECLARED BY THE PILOT? YES _____ NO _____ U/K X
EXPLAIN Aircraft departed from uncontrolled airport.

REPORT WHAT YOU KNOW OF RADIO TRANSMISSIONS Unknown.

WAS RADIO COMMUNICATION/ATC PACKAGE ORDERED BY NTSB? YES _____ NO X

WAS FOIA REQUEST SENT FOR ATC PACKAGE? YES _____ NO X

OPERATIONS NOTES

On January 30, 2011, at about 0720 Pacific Standard Time (PST), a 1969 PA-30 Twin Comanche registered as N64RJ impacted between two houses shortly after departing from the Big Bear Airport (L35) in Big Bear City, CA. The impact destroyed the aircraft. The Pilot, Jose Natividad Flores age 55 of Los Angeles, CA and sole occupant received serious injuries.

The aircraft departed Big Bear Airport (L35) at about 0715 PST and was en route to the Whiteman Airport (WHP) in Pacoima, CA on a personal flight. The accident site was about ¼ mile east of the Big Bear Airport. Visual meteorological conditions (VMC) existed at the time of the accident.

The NTSB reported that the pilot had limited recall of the accident flight. The pilot stated that he departed to the west. After departure he reported making a left crosswind turn when the right engine lost power. He then continued downwind making a left base to final. He stated that he saw the end

of the runway while on final but had no recall beyond that.

A mechanic at Exodus Air Service Corporation reported to the NTSB that the pilot had called him the day prior to the accident and reported that the right engine had some problems. The mechanic told the pilot to not fly the aircraft until a mechanic looked at it. The pilot told the mechanic that there were no mechanics in Big Bear. The mechanic suggested that he run the engines and make sure they developed full power, if not then he told the pilot not to fly the airplane. The pilot was to call him with the results of the engine run but he never heard back from the pilot.

WEIGHT & BALANCE

| ITEM | WT. (LBS.) | | ARM (IN.) | MOMENT (IN. LBS.) | |
|---|---|---|---|---|---|
| BASIC AIRPLANE | 2658.07 | | 82.99 | W&B dated 11/20/99 | 220603.29 |
| PILOT'S SEAT | 185 | | 85.2 | | 15762 |
| COPILOT'S SEAT | 0 | | 85.2 | Seat not occupied | 0.00 |
| SEAT NO. 3 | 0 | | 120.5 | Seat not occupied | 0.00 |
| SEAT NO. 4 | 0 | | 120.5 | Seat not occupied | 0.00 |
| SEAT NO. 5 | 0 | | 148.0 | Seat not occupied | 0.00 |
| SEAT NO. 6 | 0 | | 148.0 | Seat not occupied | 0.00 |
| SEAT NO. 7 (JUMP) | 0 | | N/A | Not installed | 0.00 |
| FUEL GAL. INBRD. | 324 | | 90.0 | 54.0 gallons | 29160 |
| FUEL GAL. OUTBRD. | 180 | | 95.0 | 30 gallons | 17100 |
| FUEL GAL. TIP | 0 | | N/A | Not installed | 0.00 |
| BAGGAGE FORWARD | 0 | | N/A | Not installed | 0.00 |
| BAGGAGE AFT | 0 | | 142.0 | None observed. | 0.00 |
| | | | | | |
| TOTAL WEIGHT | 3347.07 | CG | 84.4396 | TOTAL MOMENT | 282625.29 |
| | | | | | |

AIRCRAFT MAX. GROSS WEIGHT 3,600.0 LBS. AIRCRAFT C.G. RANGE +81" to +92"

DID PILOT PERFORM A WEIGHT AND BALANCE CHECK? YES _____ NO _____ U/K X

WAS AIRCRAFT BEING OPERATED WITHIN ITS LIMITATIONS?

| | | | | |
|---|---|---|---|---|
| C.G. | YES X | NO _____ | U/K _____ |
| WEIGHT | YES X | NO _____ | U/K _____ |

SOURCE OF WEIGHT & BALANCE INFORMATION

Weight & Balance data sheet dated 11/20/99. Fuel calculated as full. Pilot's medical weight.

## WRECKAGE DOCUMENTATION

### COMPONENT CONDITION

| | | |
|---|---|---|
| D - DESTROYED | F - FIRE DAMAGE | U/K - UNKNOWN |
| B - BROKEN | I - IMPACT DAMAGE | N/A - NOT APPLICABLE |
| N - NO DAMAGE | S - SEPARATED | N/O - NOT OBTAINABLE |
| NOTE DIRECTION OF FAILURE | | N/L - NOT LOCATED |

### LEFT WING

| | |
|---|---|
| ATTACHMENT FWD | Cut by retriever. |
| MAIN | Cut by retriever. |
| AFT | Cut by retriever. |
| LEFT STALL STRIP(S) | N/L |
| LEFT FUEL TANK(S) | I |
| LEFT FUEL FILLER NECK RESTRICTOR(S) | N |
| LEFT AILERON | D, I |
| BALANCE WEIGHT | N |
| CONTROL CABLES | N |
| STOP ASSEMBLY | U/K |
| LEFT FLAP | I |
| POSITION | N/O |
| MECHANISM | I |
| LEFT MAIN GEAR COND. | I |
| POSITION | Extended |

### RIGHT WING

| | |
|---|---|
| ATTACHMENT FWD | Cut by retriever. |
| MAIN | Cut by retriever. |
| AFT | Cut by retriever. |
| RIGHT STALL STRIP(S) | I |
| RIGHT FUEL TANK(S) | I |
| RIGHT FUEL FILLER NECK RESTRICTOR(S) | N |
| RIGHT AILERON | I |
| BALANCE WEIGHT | N |
| CONTROL CABLES | N |
| STOP ASSEMBLY | U/K |
| RIGHT FLAP | I |
| POSITION | N/O |
| MECHANISM | I |
| RIGHT MAIN GEAR COND. | I |
| POSITION | Extended |

### TAIL SURFACES

| | |
|---|---|
| VERT. STABILIZER | I |
| RUDDER | I |
| BALANCE WEIGHT | N |
| CONTROL CABLES | N |
| STOP ASSEMBLY | U/K |
| HORIZ. STAB. | I |
| BALANCE WEIGHT(S) | N |
| CONTROL CABLES | N |
| STOP ASSEMBLY | U/K |

### FUSELAGE

| | |
|---|---|
| FWD CABIN DOOR | N |
| AFT CABIN DOOR | N/A |
| FWD BAGGAGE DOOR | N/A |
| AFT BAGGAGE DOOR | N |
| NOSE SECTION/COWL | D, I |
| HYDRAULIC PUMP | N/A |
| BATTERY | S, I |
| NOSE GEAR\TAIL WHEEL | I |
| POSITION | N/O |
| EMERGENCY EXIT | U/K |

### TRIM TAB POSITIONS

| | SHAFT EXTENSION | THREADS | LEADING EDGE TRAILING EDGE | TAB LEFT/RIGHT UP/DOWN |
|---|---|---|---|---|
| RUDDER | U/K | U/K | | |
| HORIZONTAL STAB | U/K | U/K | | |
| AILERON | N/A | N/A | | |

## COCKPIT DOCUMENTATION

| | | | |
|---|---|---|---|
| LT. THROTTLE POSITION | ½" from full forward. | LT. FUEL FLOW | Digital |
| RT. THROTTLE POSITION | Full forward. | RT. FUEL FLOW | Digital |
| LT. MIXTURE POSITION | ½" from full rich. | LT. FUEL PRESS | N/A |
| RT. MIXTURE POSITION | Full rich. | RT. FUEL PRESS | N/A |
| LT. PROP CONTROL POS. | 1" from full increase. | LT. OIL PRESS | Zero |
| RT. PROP CONTROL POS. | ½" from full increase. | RT. OIL PRESS | Zero |
| LT. ~~CARB HEAT~~/ALT AIR | Closed | LT. OIL TEMP | Zero |
| RT. ~~CARB HEAT~~/ALT AIR | Closed | RT. OIL TEMP | Zero |
| LT. COWL FLAP(S) | Open | LT. CYL. HD. TEMP | Off low scale. |
| RT. COWL FLAP(S) | Closed | RT. CYL. HD. TEMP | Off low scale. |
| LT. EGT POSITION | Digital | LT. AMPMETER | Zero |
| RT. EGT POSITION | Digital | RT. AMPMETER | Zero |
| LT. MANIFOLD PRESSURE | 28" | | |
| RT. MANIFOLD PRESSURE | 27" | VOLTMETER | Digital |

## INSTRUMENTS

| | | | | | | |
|---|---|---|---|---|---|---|
| LT. CLOCK | 4:21:34 | FUEL QUAN. | LM: | Zero | RM: | Zero |
| RT. CLOCK | N/A | | LT. TIP: | N/A | RT. TIP: | N/A |
| LT. AIRSPEED | I, needle missing. | | | | | |
| RT. AIRSPEED | N/A | | | | | |
| LT. RATE OF CLIMB | +150 | MASTER SWITCH | D, I | | | |
| RT. RATE OF CLIMB | N/A | | | | | |
| LT. ALTIMETER | 7,450 feet | LT. ALTERNATOR | On | | | |
| RT. ALTIMETER | N/A | RT. ALTERNATOR | On | | | |
| LT. KOLLSMAN | 30.09 | LT. ENG. MAG | LT | On | RT | On |
| RT. KOLLSMAN | N/A | RT. ENG. MAG | LT | On | RT | On |
| LT. DG/HSI | N | LT. FUEL PUMP | On | | | |
| RT. DG/HSI | N/A | RT. FUEL PUMP | On | | | |
| LT. ARTIF. HORIZ./FD | N, LW down 40°, NS down 30° | | | | | |
| RT. ARTIF. HORIZ./FD | N/A | CIRCUIT BREAKERS | N. See narrative on page 9 for additional information. | | | |
| LT. TURN INDICATOR | LW: Low; Ball right in race. | | | | | |
| RT. TURN INDICATOR | N/A | INSTRUMENT LIGHTS | N/L | | | |
| SUCTION/PRESSURE | Zero | NAV. LIGHTS | N/L | | | |
| COMPASS | 090° | ANTI-COLLIS. LIGHT(S) | Off | | | |
| RADAR ALTITUDE | N/A | LANDING LIGHTS | Left: Off; Right: On | | | |
| HOBBS METER | N/O | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| TACHOMETER | N | INDICATION: | RPM | Zero | HOURS | 2167.4 |
| TACHOMETER | N | INDICATION: | RPM | Zero | HOURS | 2165.9 |

| | | | |
|---|---|---|---|
| CONTROL WHEEL/STICK | I | ELEVATOR TRIM IND. | I, Full nose down. |
| CONTROL COLUMN/CABLES | U/K | AILERON TRIM IND. | N/L |
| RUDDER PEDAL ASSY | I | RUDDER TRIM IND. | Neutral |
| FLAP HANDLE/SWITCH CONDITION/POSITION | Switch; Up | | |
| FLAP INDICATOR | Up | LT. FUEL SELECTOR POS. | Selector: Aux; Toggle: Aux |
| OXYGEN CONTROL | N/L | RT. FUEL SELECTOR POS. | Selector: Main; Toggle: Aux |

| | | | |
|---|---|---|---|
| LANDING GEAR SWITCH | Down | CROSSFEED POSITION | Off |
| LANDING GEAR INDICATOR | Lights | LT. FIREWALL SHUTOFF | N/A |
| EMER. GEAR CONTROL | Stowed and secure. | RT. FIREWALL SHUTOFF | N/A |
| REMOTE E.L.T. SWITCH | N/L | ENGINE PRIMER(S) | N/A |

ENVIRONMENTAL

| | | | |
|---|---|---|---|
| CABIN HEAT | Off | PITOT HEAT | Off |
| VENT BLOWER | N/L | STALL WRN HEAT | N/L |
| AIR CONDITIONING | N/A | PROP HEAT | Off |
| CABIN DEFROSTER | Off | WINDSHIELD HEAT | N/A |
| FRESH AIR INTAKE | U/K | DE-ICE BOOTS | N/A |

ICE PROTECTION

EMERGENCY LOCATION TRANSMITTER INSTALLED? YES X NO _____ U/K _____

MODEL/TYPE N/L S/N N/L BATTERY DATE N/L

| | | | | | |
|---|---|---|---|---|---|
| DID E.L.T. FUNCTION? | YES | _____ | NO | _____ | U/K X |
| DID IT HELP LOCATE AIRCRAFT? | YES | _____ | NO | X | U/K _____ |

AVIONICS

AUTOPILOT MANUFACTURER Piper MODEL Altimatic IIIB S/N U/K

AUTOPILOT CONTROL BOX Off
HEADING BUG POSITION 310°
ALTITUDE PRESELECT 11,500
COUPLER SWITCH POSITION HDG

BRIDLE CABLES/SERVOS
ROLL U/K
PITCH U/K
YAW U/K
TRIM U/K

AVIONICS MASTER SWITCH CONDITION/POSITION On

AUDIO SELECTOR PANEL MODEL King KMA 24 CONDITION N
TRANSMIT SELECT POSITION Com 1

AUDIO SWITCH POSITIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| COM 1 | Out | COM 2 | Out | NAV 1 | Out | NAV 2 | Out |
| DME | Out | MKR | Out | ADF | Out | AUTO | Phone |

RADIO FREQUENCIES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| COM 1 | Digital | COM 2 | Digital | NAV 1 | Digital | NAV 2 | Digital |

NAV 1 INFORMATION
OBS POSITION 285° NEEDLE POSITION 130° FLAG Visible

NAV 2 INFORMATION
OBS POSITION 310° NEEDLE POSITION 310° FLAG Visible

TRANSPONDER SWITCH POSITION ALT CODE 1200

GPS SYSTEM MODEL Apollo 2001 LAST DATA UPDATE U/K
SWITCH POSITIONS OR DISPLAY INFORMATION Placard on panel states "GPS For VFR Use Only"

MISCELLANEOUS AVIONICS OR NON-STANDARD ELECTRICAL EQUIPMENT:
BFG Stormscope. PM1000 II Intercom. Davtron M655 Digital Indicator.

GLASS PANEL DISPLAYS

| MANUFACTURER | N/A | MODEL | N/A |
|---|---|---|---|

| | SERIAL NUMBER | CONDITION |
|---|---|---|
| PILOT PFD | | |
| MFD | | |
| CO-PILOT PFD | | |
| D.A.U. | | |

| DATA EXTRACTED? | YES | | NO | | BY WHO | |
|---|---|---|---|---|---|---|

REMARKS:

## SEAT ASSEMBLY DOCUMENTATION

| POSITION | *DESCRIBE THE CONDITION OF EACH SEAT, SEAT FRAME, AND SEAT TRACK AS WELL AS THE CONDITION AND USAGE OF SEAT BELTS AND SHOULDER HARNESSES.* |
|---|---|
| Front Left | Seat remained attached to the floor. Lap belt and shoulder harness remained attached to structure. |
| Front Right | Seat unoccupied. |
| Rear Left | Seat unoccupied. |
| Rear Right | Seat unoccupied. |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

BAGGAGE TIE DOWNS INSTALLED? YES _____ NO _____ U/K X
BAGGAGE TIE DOWNS USED? YES _____ NO _____ U/K X

CONDITION OF BAGGAGE TIE DOWNS Not examined.

FIRE

FIRE IN FLIGHT? YES _____ NO X U/K _____
EXPLAIN: _____

FIRE AFTER IMPACT? YES _____ NO X U/K _____

*INCLUDE A DETAILED DESCRIPTION OF THE AREAS BURNED, SOURCE OF IGNITION AND DAMAGE TO SURROUNDING AREA.*

## AIRFRAME NOTES

There was no NTSB on site examination. The aircraft was recovered and transported to the facilities of Aircraft Recovery Services in Pearblossom, CA On 02/02/2011 the NTSB conducted a wreckage examination. Present during the examination were:

Patrick Jones, NTSB WPR
Jon Weston, FAA Riverside
Mark Platt, Lycoming Engines
Charles Little, Piper Aircraft, Inc.

The aircraft as first viewed was laid out with the major sections of the aircraft in their near normal relationship with each other. The aircraft had been partially disassembled during the recovery process. Both the left and right wing assemblies had been cut off the fuselage at the root area. The left engine was separated from the nacelle. The right engine remained attached to the nacelle but the nacelle section with the AUX fuel tank were separated from the wing. The left and right horizontal stabilator had been disassembled from the tail empennage section. The fuselage, empennage and vertical tail section remained intact.

**Left Wing**

The left wing exhibited extensive impact damage outboard of the engine nacelle. The wing was partially broken outboard of the flap surface and was mostly destroyed. The flap surface remained attached to the wing and was in the retracted position. The aileron remained attached by the inboard hinge only and was folded back under the inboard wing surface. The landing gear remained attached. The gear retract system was cut by the retriever and the gear was up in the wheel well but was free to extend by hand.

The left main fuel tank contained fuel on site and was captured by the retriever during the recovery process. The left auxiliary bladder style tank was not observed. The left wing tip tank was destroyed by impact.

**Right Wing**

The right wing exhibited aft crushing along its entire leading edge from the nacelle area to the tip. Both the aileron and flap surface remained attached to the wing. The engine nacelle, with attached engine separated from the wing. The landing gear remained attached and was in the down and locked position.

Right main fuel tank was not breached. The retriever reported that about 5 gallons of fuel was defueled from the tank during recovery process. The right auxiliary bladder style fuel tank has a small hole. The right wing tip tank was destroyed by impact.

## Empennage

The empennage section was mostly intact. Skin wrinkling was present on the left side aft of the cabin bulkhead and forward of the vertical surface. The vertical and rudder surface remained attached and were mostly undamaged. The left and right horizontal stabilator were removed by the retriever during the recovery process but appeared mostly undamaged.

## Fuselage

According to the on scene FAA inspector, continuity of the flight control systems was established on site to all movable flight controls surfaces up to the forward cockpit section prior to the aircraft being disassembled during the recovery process.

The forward fuselage nose section and forward instrument panel section sustained extensive ground impact damage. The nose section exhibited extensive crushing signatures to the left side skins forward of the firewall section. The forward cabin and instrument panel exhibited crushing damage around the entire enclosure.

The landing gear switch was in the gear down position. The landing gear retraction system indicated that the gear was in the down position. The nose landing gear remained attached but had sustained impact damage and was destroyed. The flap transmission assembly was found in the flaps retracted (up) position.

The left engine fuel selector handle was found in the left auxiliary fuel tank detent. The right engine fuel selector handle was found in the right main fuel tank detent. A placard on the fuel selector lever indicates that the AUX tank is to be used in level flight only. Dry, blue colored stains were present on the top side of the both fuel valves.

Utilizing an ohm meter, the electrical continuity of the left and right engine magneto "P" leads of both engines from the magneto switches to where the wires were cut at the wing root area were checked and found to function normally. The wire numbers for the left engine were identified as P23A (Right Magneto) and P24A (Left Magneto). The wire numbers for the right engine were identified as P26A (Right Magneto) and P27A (Left Magneto).

Both fuel gascolator bowls were removed and visually examined. Both bowls contained clear and bright blue colored fuel. Using water finding paste, no evidence of water existed. Both bowls contained minor dirt sediment. Both fuel bowl screens were clear.